



AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for transferring subscriber location information in a network communication system, comprising:

determining the subscriber location information when a subscriber accesses the network;

the network access device converting the accessed subscriber location information into a code in the encoding format of the corresponding field in a packet~~message~~ to be sent outwards by the subscriber;

the network access device receiving a ~~message~~the packet sent from the subscriber, replacing the corresponding field in the packet~~message~~ with the determined subscriber location information code, and transferring the packet~~message~~ in the network communication system.

2. (Original) The method for transferring subscriber location information in a network communication system according to claim 1, wherein said accessed subscriber location information comprises:

network access device ID in the network accessed by the subscriber, slot number of the subscriber interface board in the network access device where the subscriber accesses, port number of the subscriber interface board where the subscriber accesses, and MAC (Media Access Control) address information of the subscriber terminal.

3. (Currently Amended) The method for transferring subscriber location information in a network communication system according to claim 1, wherein said step of converting the accessed subscriber location information into a code in the encoding format of the corresponding field in the packet~~message~~ to be sent outwards by the subscriber comprises:

the network access device converting the accessed subscriber location information into a code in the same encoding format as the MAC address carried in the packetmessage to be sent outwards by the subscriber.

4. (Currently Amended) The method for transferring subscriber location information in a network communication system according to claim 1, wherein said step of the network access device receiving the packetmessage sent from the subscriber, replacing the corresponding field in the packetmessage with the determined subscriber location information code, and transferring the packetmessage in the network communication system comprises:

the network access device receiving the packetmessage sent from the subscriber;
the network access device replacing the source MAC address information carried in the packetmessage sent from the subscriber with the determined subscriber location information code, and sending the packetmessage to the access server.

5. (Previously Presented) The method for transferring subscriber location information in a network communication system according to claim 4, wherein
said network access device is a broadband access device in a broadband network;
said access server is a BRAS (Broadband Remote Access Server) or a network device with BRAS function in a broadband network.

6. (Currently Amended) The method for transferring subscriber location information in a network communication system according to claim 5, further comprising:
configuring a correspondence between the ~~physical~~ subscriber location information and the subscriber location information code in the broadband access device;
configuring a correspondence between the subscriber location information code and the ~~physical~~ subscriber location information in the broadband access server, or configuring a correspondence between the subscriber location information code and the ~~physical~~ subscriber location information in a Radius Server (remote authentication server).

7. (Currently Amended) The method for transferring subscriber location information in a network communication system according to claim 4, further comprising: replacing the destination MAC address in the packet, from the network-side port of the network access device, addressed to the subscriber with the MAC address of the subscriber terminal; and

sending the packet to the subscriber terminal. ~~replacing the destination MAC address in the message to be sent by the network access device from its network side port to the subscriber with the MAC address of the subscriber terminal, and then sending the message to the subscriber.~~

8. (Currently Amended) The method for transferring subscriber location information in a network communication system according to claim 3, wherein said step of converting the accessed subscriber location information into a code in the same encoding format as the MAC address carried in the packet message to be sent outwards by the subscriber comprises:

the network access device encoding the subscriber location information into a 48-bit subscriber location information code in the encoding format of MAC address.

9. (Original) The method for transferring subscriber location information in a network communication system according to claim 8, wherein said subscriber location information code comprises:

one or more indexes of broadband access device number, device frame number, slot number, and port number that are required to identify the subscriber location information;

one or more indexes of MAC address, priority, protocol encapsulation mode, subscriber type, and PVC (Permanent Virtual Connection) ID of the subscriber terminal that describe subscriber characteristics.

10. (Previously Presented) The method for transferring subscriber location information in a network communication system according to claim 8, wherein said 48-bit subscriber location information code comprises:

24 bits, content determined by network access device manufacturers; 5 bits, index of MAC address and/or PVC ID of the subscriber terminal; 7 bits, index of the network access device ID; 7 bits, index of the access port number; and 5 bits, index of slot number of the subscriber interface board where the subscriber accesses.

11. (Currently Amended) The method for transferring subscriber location information in a network communication system according to claim 9, wherein said subscriber location information encoding comprises:

mapping the ~~physical~~ subscriber location information to the subscriber location information code through direct mapping; or

converging the ~~physical~~ subscriber location information to an intermediate variable ID, and then mapping the intermediate variable ID to the subscriber location information code.

12. (Previously Presented) The method for transferring subscriber location information in a network communication system according to claim 3, wherein said step of the network access device receiving the message sent from the subscriber, replacing the corresponding field in the message with the determined subscriber location information code, and transferring the message in the network communication system comprises:

the network access device receiving the message sent from the subscriber;

the network access device replacing the source MAC address information carried in the message sent from the subscriber with the determined subscriber location information code, and sending the message to the access server.

13. (Previously Presented) The method for transferring subscriber location information in a network communication system according to claim 9, wherein said 48-bit subscriber location information code comprises:

24 bits, content determined by network access device manufacturers; 5 bits, index of MAC address and/or PVC ID of the subscriber terminal; 7 bits, index of the network access device ID; 7 bits, index of the access port number; and 5 bits, index of slot number of the subscriber interface board where the subscriber accesses.

14. (New) A method for converting MAC address, comprising the steps of:
a network access device generating an MAC address from an MAC address resource pool; and

replacing the source MAC address in a packet from a subscriber with said generated MAC address.

15. (New) The method for converting MAC address according to claim 14, wherein said generated MAC address is unique.

16. (New) The method for converting MAC address according to claim 14, wherein said step of generating a MAC address from the MAC address resource pool further comprises the step of: generating the MAC address according to at least one of network access device ID in the network accessed by the subscriber, slot number of the subscriber interface board in the network access device where the subscriber accesses, and port number of the subscriber interface board where the subscriber accesses.

17. (New) The method for converting MAC address according to claim 14, further comprising:

replacing the destination MAC address in the packet, from the network-side port of the network access device, addressed to the subscriber with the MAC address of the subscriber terminal; and
sending said packet to the subscriber terminal.